

**IN THE CLAIMS:**

Please amend claims 1-8, 10, 15, and 17-30, and cancel claim 9, as follows:

1. (Currently Amended) A method for accessing a multicast event comprising:

receiving a request for a ticket at a ticket server, said request being from a receiving client, wherein the receiving client is to participate in the multicast event transmitted by a sending client, receipt of said ticket to qualify the receiving client to access a key from a key server, wherein the key is a symmetric key that the sending client uses to encrypt the multicast event and the receiving client uses to decrypt the multicast event, said key to facilitate ~~an event between~~ access to the multicast event by the client and at least one additional at least one receiving client;

determining if the receiving client is authorized to receive the key; and

transmitting the ticket from the ticket server to the receiving client if the receiving client is authorized.

2. (Currently Amended) The method of claim 1 wherein determining if the receiving client is authorized comprises:

accessing a database that defines authorized clients; and

determining if the receiving client is among the authorized clients defined by the database.

3. (Currently Amended) The method of claim 1 further comprising:

accessing a database that defines associations between authorized clients and multicast events;

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constructing a summary of all multicast events to which the receiving client is associated based on the database; and  
including the summary in the ticket.

4. (Currently Amended) The method of claim 3 wherein the database comprises a directed hierarchy of groups, wherein each group comprises at least one member client and/or at least one member event, and wherein constructing the summary comprises:

locating a particular group in the database to which the receiving client is a member client;

adding identifying information to the summary for each multicast event, if any, belonging to the particular group;

locating at least one ancestor group to the particular group in the directed hierarchy of groups; and

adding identifying information to the summary for each event, if any, belonging to the at least one ancestor group.

5. (Currently Amended) The method of claim 1 wherein the ticket comprises at least one of an identifier that indicates a group to which the receiving client belongs, a list identifying at least one multicast event for which the receiving client is qualified, and a digital certificate that indicates that the receiving client is authorized for each listed multicast event.

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6. (Currently Amended) The method of claim 5 wherein the list comprises at least one of a title of each listed event, an internet protocol (IP) address for each listed, a time indication for each listed event, and an IP address for a key server corresponding to each listed multicast event.

7. (Currently Amended) A method comprising:

receiving a request for a key at a key server, said request being received from a receiving client, and said key to facilitate ~~an event between~~ access to the multicast event by the client and at least one additional receiving client, wherein the key is a symmetric key that the sending client uses to encrypt the multicast event and the receiving client uses to decrypt the multicast event;

determining if the receiving client is qualified to receive the key based on a ticket previously obtained by the receiving client from a ticket server; and

transmitting the key from the key server to the receiving client if the receiving client is qualified.

8. (Currently Amended) The method of claim 7 wherein the key comprises at least one of a ~~symmetric cryptographic key for the event,~~ an initiation time for use of the key, and a lifetime for the key.

9. (Canceled)

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10. (Currently Amended) The method of claim 7 wherein the request comprises an initial request for the event, and wherein receiving the initial request comprises:

receiving the initial request at a particular time during a predetermined period before the multicast event, said particular time being randomly generated by the receiving or sending client.

11. (Currently Amended) The method of claim 7 further comprising:

establishing a secure point-to-point link between the key server and the receiving client in response to the requests, wherein the key is transmitted over the secure point-to-point link.

12. (Currently Amended) The method of claim 7 wherein the request comprises one of a plurality of refresh requests, wherein each of the plurality of refresh requests corresponds to one of a plurality of forward security windows during the multicast event, wherein each of the plurality of forward security windows comprises a repeated time interval, and wherein receiving the refresh request comprises:

receiving the refresh request at a particular time within a corresponding forward security window, said particular time being randomly generated by the receiving or sending client for a first forward security window and applied at the repeated time interval thereafter.

13. (Currently Amended) The method of claim 7 wherein the key corresponds to a first interval of the multicast event, and wherein the method further comprises:

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determining if the receiving client remains qualified to receive a refresh key; and

transmitting the refresh key to the receiving client if the receiving client remains qualified, said refresh key corresponding to the subsequent interval of the multicast event.

14. (Currently Amended) The method of claim 7 wherein the key corresponds to a first interval of the multicast event, and wherein the method further comprises:

receiving a plurality of additional requests for the key from a plurality of additional receiving clients;

determining if each of the plurality of additional receiving clients are qualified to receive the key based on a ticket previously obtained by each of the plurality of additional receiving clients from the ticket server;

transmitting the key to each of the plurality of additional receiving clients that are qualified;

determining if the receiving client and each of the plurality of additional receiving clients remain qualified to receive a refresh key; and

transmitting the refresh key to the receiving client if the receiving client remains qualified and to each of the plurality of additional receiving clients that remain qualified, said refresh key corresponding to a subsequent interval of the multicast event.

15. (Currently Amended) The method of claim 14 further comprising:

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establishing a secure multicast link from the key server to the receiving client and the plurality of additional receiving clients, wherein the refresh keys is transmitted through the secure multicast link.

16. (Original) The method of claim 7 wherein the key server has a synchronized time with respect to a sending client for the event to within a margin of error, and wherein the method further comprises:

determining which of a plurality of available keys to use for said key based on the synchronized time.

17. (Currently Amended) The method of claim 7 wherein determining comprises at least one of:

verifying that the request is received within a predetermined period before the multicast event or time interval during the multicast event; and

verifying that the request includes credentials for the multicast event.

18. (Currently Amended) The method of claim 7 wherein the request is received within a predetermined time frame after the multicast event starts, wherein said multicast event is not encrypted during the predetermined time.

19. (Currently Amended) A machine readable storage medium having stored thereon machine executable instructions, execution of said machine executable instructions to implement a method comprising:

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obtaining a ticket at a client from a ticket server, said ticket to facilitate access to a multicast event by the client ~~defining an event between the client and at least one additional client;~~

obtaining a key at the client from a key server based on the ticket, wherein the key is a symmetric key used to encrypt the multicast event and used by the client to decrypt the event; and

participating in the multicast event ~~with the at least one additional client~~ based on the key.

20. (Currently Amended) The machine readable storage medium of claim 19 wherein obtaining the ticket comprises:

sending a request to the ticket server for a list of multicast events in which the client is qualified to participate.

21. (Currently Amended) The machine readable medium of claim 19 wherein obtaining the key comprises:

receiving an indication to participate in the multicast event; and

initiating a transaction with the key server at a location indicated by the ticket and within a time frame prior to a start time of the multicast event indicated by the ticket.

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22. (Currently Amended) A machine readable storage medium having stored thereon machine executable instructions, the execution of said machine executable instructions to implement a method comprising:

receiving a request for a key at a key server, said request being received from a receiving client, and said key to facilitate an event between the receiving client and ~~at least one additional~~ a sending client, wherein the key is a symmetric key that the sending client uses to encrypt the event and the receiving client uses to decrypt the event;

determining if the receiving client is qualified to receive the key based on a ticket previously obtained by the receiving client from at ticket server; and

transmitting the key from the key server to the receiving client if the receiving client is qualified.

23. (Currently Amended) The machine readable storage medium of claim 22 wherein the request comprises an initial request for the event, and wherein receiving the initial request comprises:

receiving the initial request at a particular time during a predetermined period before the event, said particular time being randomly generated by the receiving client.

24. (Currently Amended) The machine readable storage medium of claim 22 further comprising:

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establishing a secure point-to-point link between the key server and the receiving client in response to the request, wherein the key is transmitted over the secure point-to-point link.

25. (Currently Amended) The machine readable storage medium of claim 22 wherein the request comprises one of a plurality of refresh requests, wherein each of the plurality of refresh requests corresponds to one of a plurality of forward security windows during the event, wherein each of the plurality of forward security windows comprises a repeated time interval, and wherein receiving the refresh request comprises:

receiving the refresh request at a particular time within a corresponding forward security window, said particular time being randomly generated by the receiving or sending client for a first forward security window and applied at the repeated time interval thereafter.

26. (Currently Amended) The machine readable storage medium of claim 22 wherein the key corresponds to a first interval of the event, and wherein the method further comprises:

determining if the receiving client remains qualified to receive a refresh key; and

transmitting the refresh key to the receiving client if the receiving client remains qualified, said refresh key corresponding to a subsequent interval of the event.

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27. (Currently Amended) The machine readable storage medium of claim 22 wherein the key corresponds to a first interval of the event, and wherein the method further comprises:

receiving a plurality of additional requests for the key from a plurality of additional receiving clients;

determining if the each of the plurality of additional receiving clients are qualified to receive the key based on a ticket previously obtained by each of the plurality of additional receiving clients from the ticket server;

transmitting the key to each of the plurality of additional receiving clients that are qualified;

determining if the receiving client and each of the plurality of additional receiving clients remain qualified to receive a refresh key; and

transmitting the refresh key to the receiving client if the receiving client remains qualified and to each of the plurality of additional receiving clients that remain qualified, said refresh key corresponding to a subsequent interval of the event.

28. (Currently Amended) The machine readable storage medium of claim 27 wherein the request is received within a predetermined time frame after the event starts, wherein said event is not encrypted during the predetermined ~~period~~ time frame.

29. (Currently Amended) A ticket server apparatus comprising:

a port to receive a request for a ticket, said request being from a client, said ticket to qualify the client to access a key from a key server, said key to facilitate an

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event between the client and at least one additional client, wherein the key is a symmetric key used to encrypt the event and used by the client to decrypt the event;  
and

circuitry to determine if the client is authorized to receive the key, and to transmit the ticket through the port to the client if the client is authorized.

30. (Currently Amended) A key server apparatus comprising:

a port to receive a request for a key, said request being received from a client, and said key to facilitate an event between the client and at least one additional client, wherein the key is a symmetric key used to encrypt the event and used by the client to decrypt the event; and

circuitry to determine if the client is qualified to receive the key based on a ticket previously obtained by the client from a ticket server, and to transmit the key through the port to the client if the client is qualified.

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